

MANAGEMENTUL PUBLICATIILOR

“ISI” PRIN INDICATORI DE PERFORMANTA

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Rezumat

Lucrarea își propune să prezinte modalitățile prin care departamentul de management și administrare a cercetării, dintr-o anumită instituție, poate să intervină cu politici specifice pentru creșterea vizibilității publicațiilor științifice. Analiza scientometrică este realizată pe publicațiile ISI ale Universității “Constantin Brâncuși” din Târgu Jiu și propune să scoată în evidență indicatori de performanță prin care să se monitorizeze vizibilitatea lucrărilor indexate în baza Thomson-Reuters ISI.

Cuvinte cheie: *analiza scientometrică, Web of Science, indicatori de performanță, h-index*

Introducere

Utilizarea începând din 2005 a criteriului privind numărul publicațiilor ISI în evaluarea cercetării științifice, dar și în promovarea didactică în învățământul superior a orientat publicațiile din România, atât către revistele cotate ISI, cât și spre conferințele indexate ISI, Universitatea “Constantin Brâncuși” din Târgu Jiu (UCB) înscriindu-se și ea în acest flux editorial.

Metoda de analiză

Pentru obținerea elementelor scientometrice care formează vizibilitatea UVVG în baza ISI a fost folosită

ISI PUBLICATIONS

MANAGEMENT THROUGH PERFORMANCE INDICATORS

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Abstract

The paper proposes to describe the ways in which the research management and administration department from a certain institution can interfere with specific policies in order to increase the visibility of scientific publications. Scientometric analysis is made on ISI publications of “Constantin Brâncuși” University from Târgu Jiu and wants to reveal performance indicators able to monitor the visibility of the papers indexed in Thomson-Reuters ISI base.

Key words: *scientometric analysis, Web of Science, performance indicators, h-index*

Introduction

The use of the criterion regarding the number of ISI publications in scientific research assessment and in the didactic promotion in higher education since 2008 has oriented Romanian publications towards ISI quoted magazines, as well as towards ISI indexed conferences, “Constantin Brâncuși” University from Târgu Jiu (UCB) being in this editorial flow as well.

Methods of analysis

In order to get scientometric elements that form UVVG visibility, the computer platform “ISI-Web” of

platforma informatica “ISI-Web of Knowledge” .

Din bara de tag-uri a fost selectata baza de date “Web of Science” ce este formata din trei indexuri corespunzatoare revistelor cotate ISI si din doua indexuri corespunzatoare conferintelor indexate ISI.

Din interfata de cautare a bazei “Web of Science” au fost selectate campurile “address” si “year published” si completate cu “Brancusi”, respectiv “2005-2009”.

Pentru defalcarea analizei pe tipuri de lucrari stiintifice, pe surse (reviste sau conferinte)., pe anii din intervalul 2005-2009 au fost folosite filtrele “document types”, “source titles” si “publication years”.

In urma fiecarei rafinari au fost intocmite tabele si calculate ponderi sau evolutii procentuale ce au stat la baza concluziilor formulate.

Rezultate si discutii

In perioada 2005-2009, UCB se regaseste in baza Web of Science de un numar de 76 de publicatii ISI. Un prim indicator de performanta ce trebuie monitorizat este numarul de denumiri ale universitatii ca si afiliere institutionala in baza ISI.

Prin cautarea in baza ISI a tuturor publicatiilor UCB folosind termenul “brancusi” au fost descoperite 10 sintaxe diferite, dupa cum urmeaza:

Knowledge” was used in ISI base.

In the tag bar “Web of Science” database was selected, which consists of three indexes which correspond to ISI quoted magazines and two indexes that correspond ISI indexed conferences.

In the search interface of “Web of Science” base, the fields “address” and “year published” were selected and they were filled-in with “Brancusi”, and “2005-2009”, respectively.

In order to divide the analysis on types of scientific papers, on sources (magazines or conferences), the filters “document types”, “source titles” and “publication years” were used for years 2005-2009.

After each refining, tables were drawn-up and weights or percentage evolutions were calculated that were the basis for conclusions.

Results and discussions

During 2005-2009, UCB can be found in Web of Science base with a number of 76 ISI publications. The first performance indicator that has to be monitored is the number of names of the university as institutional affiliation in the ISI base.

By searching the ISI base for all UCB publications using the term “brancusi” 10 different syntaxes were discovered as follows:

CONSTANTIN BRANCUSI UNIV	21	27.63%
UNIV CONSTANTIN BRANCUSI TARGU JIU	15	19.74%
CONSTANTIN BRANCUSI UNIV TG JIU	12	15.79%
UNIV CONSTANTIN BRANCUSI	11	14.47%
UNIV CONSTANTIN BRANCUSI TG JIU	10	13.16%
CONSTANTIN BRANCUSI UNIV TARGU JIU	3	3.95%
CONSTANTIN BRANCUSI UNIV TIRGU JIU	1	1.32%
UNIV CONSTANTIN BRANCUSI TARGU JIU BLD	1	1.32%
UNIV CONSTATIN BRANCUSI	1	1.32%
UNIV COSTANTIN BRANCUSI	1	1.32%

La nivelul universitatii trebuie sa se impuna o denumire standard a institutiei, pe care toti autorii s-o foloseasca in toate publicatiile, astfel, la o cautare sa apara toate publicatiile pe un camp. Un evaluator extern nu va cauta in baza ISI mai multe denumiri posibile pentru o institutie, se va opri la prima inregistrare si astfel punctajul final va fi mult sub cel real. In cazul UCB, 21 de publicatii in perioada 2005-2009 ar aduce doar 27.63% din punctajul real la o evaluare institutionala.

Portofoliul publicatiilor ISI ale UCB este format din urmatoarele tipuri (“document types”) de lucrari stiintifice:

- “article” -51;
 - “proceedings paper” -25.
- Lucrarile au fost publicate astfel:
- 54 in reviste cotate ISI (“article” - 51, “proceedings paper” -3).
 - 22 in volumele de lucrari ale conferintelor indexate ISI nepublicate in reviste cotate ISI (“proceedings paper” -22).

In cazul selectarii in Web of Science doar a zonei de conferinte indexate ISI se obtin 24 de lucrari stiintifice, (“proceedings paper” -24), dar 2 au fost publicate in cadrul numerelor speciale ale unor reviste cotate ISI dedicate conferintelor respective si sunt numarate in cadrul celor 54 de lucrari publicate in reviste cotate ISI. Indicatorul de performanta de trebuie urmarit aici este “numarul de lucrari publicate in volumele conferintelor indexate ISI nepublicate in reviste coate ISI”. Trebuie amintit aici de programul CNCSIS prin care se premiaza doar “proceedings paper” publicate in revistele cotate ISI.

A standard name of the institution has to be established at the level of the university, that all authors should use in their publications, so that, during a search, all publications appear on a field. An external evaluator will not search the ISI base for more possible names for an institution, but it will rather stop at the first name and therefore the final score will be below the real one. In the case of UCB, 21 publications from 2005-2009 would bring only 27.63% of the real score at an institutional evaluation.

UCB ISI publications portfolio consists of the following types (“document types”) of scientific papers:

- “article” -51;
 - “proceedings paper” -25.
- The papers were published as follows:
- 54 in ISI magazines (“article” -51, “proceedings paper” -3).
 - 22 in papers volumes of ISI conferences which were not published in ISI magazines (“proceedings paper” -22).

If in Web of Science we select only the ISI indexed conference area, 24 scientific papers result, (“proceedings paper” -24), but 2 were published in the special appearances of some ISI quoted magazines dedicated to the respective conferences and are numbered within the 54 papers published in ISI quoted magazines. The performance indicator that has to be followed here is “the number of papers published in the volumes of ISI indexed conferences not published in ISI magazines”. We have to mention here the CNCSIS program that awards only the “proceedings papers” published in ISI magazines.

Prezentam in tabelulul urmator situatia lucrarilor publicate in reviste cotate ISI.

Nr. Crt.	TITLU REVISTA	Nr. publicatii	Pondere
1	REVISTA DE CHIMIE (ROM)	15	27.78%
2	MATERIALE PLASTICE (ROM)	6	11.11%
3	JOURNAL OF ENVIRONMENTAL PROTECTION AND ECOLOGY	5	9.26%
4	ENVIRONMENTAL ENGINEERING AND MANAGEMENT JOURNAL (ROM)	3	5.56%
5	NONLINEAR ANALYSIS-THEORY METHODS & APPLICATIONS	3	5.56%
6	CERAMICS-SILIKATY	2	3.70%
7	INTERNATIONAL JOURNAL OF COMPUTERS COMMUNICATIONS & CONTROL (ROM)	2	3.70%
8	INTERNATIONAL JOURNAL OF REFRIGERATION-REVUE INTERNATIONALE DU FROID	2	3.70%
9	JOURNAL OF OPTOELECTRONICS AND ADVANCED MATERIALS (ROM)	2	3.70%
10	REVUE ROUMAINE DE CHIMIE (ROM)	2	3.70%
11	ANNALES POLONICI MATHEMATICI	1	1.85%
12	CZECHOSLOVAK MATHEMATICAL JOURNAL	1	1.85%
13	DYNAMICAL SYSTEMS-AN INTERNATIONAL JOURNAL	1	1.85%
14	ENERGY	1	1.85%
15	ENERGY AND BUILDINGS	1	1.85%
16	FUZZY SETS AND SYSTEMS	1	1.85%
17	IMA JOURNAL OF MATHEMATICAL CONTROL AND INFORMATION	1	1.85%
18	INFORMATION SCIENCES	1	1.85%
19	JOURNAL OF MATHEMATICAL ANALYSIS AND APPLICATIONS	1	1.85%
20	METALURGIA INTERNATIONAL (ROM)	1	1.85%
21	ROMANIAN JOURNAL OF ECONOMIC FORECASTING (ROM)	1	1.85%
22	STUDIA SCIENTIARUM MATHEMATICARUM HUNGARICA	1	1.85%

We describe in the following table the record of papers published in ISI magazines.

Nr. Crt.	MAGAZINE TITLE	No. of publications	Weight s
1	CHEMISTRY MAGAZINE (ROM)	15	27.78%
2	PLASTIC MATERIALS (ROM)	6	11.11%
3	JOURNAL OF ENVIRONMENTAL PROTECTION AND ECOLOGY	5	9.26%

4	ENVIRONMENTAL ENGINEERING AND MANAGEMENT JOURNAL (ROM)	3	5.56%
5	NONLINEAR ANALYSIS-THEORY METHODS & APPLICATIONS	3	5.56%
6	CERAMICS-SILIKATY	2	3.70%
7	INTERNATIONAL JOURNAL OF COMPUTERS COMMUNICATIONS & CONTROL (ROM)	2	3.70%
8	INTERNATIONAL JOURNAL OF REFRIGERATION-REVUE INTERNATIONALE DU FROID	2	3.70%
9	JOURNAL OF OPTOELECTRONICS AND ADVANCED MATERIALS (ROM)	2	3.70%
10	REVUE ROUMAINE DE CHIMIE (ROM)	2	3.70%
11	ANNALES POLONICI MATHEMATICI	1	1.85%
12	CZECHOSLOVAK MATHEMATICAL JOURNAL	1	1.85%
13	DYNAMICAL SYSTEMS-AN INTERNATIONAL JOURNAL	1	1.85%
14	ENERGY	1	1.85%
15	ENERGY AND BUILDINGS	1	1.85%
16	FUZZY SETS AND SYSTEMS	1	1.85%
17	IMA JOURNAL OF MATHEMATICAL CONTROL AND INFORMATION	1	1.85%
18	INFORMATION SCIENCES	1	1.85%
19	JOURNAL OF MATHEMATICAL ANALYSIS AND APPLICATIONS	1	1.85%
20	INTERNATIONAL METALLURGY (ROM)	1	1.85%
21	ROMANIAN JOURNAL OF ECONOMIC FORECASTING (ROM)	1	1.85%
22	STUDIA SCIENTIARUM MATHEMATICARUM HUNGARICA	1	1.85%

Un prim indicator ar fi ponderea articolelor publicate in reviste romanesti. In acest caz numaram 29 de articole care inseamna 53.7%. In scopul cresterii vizibilitatii publicatiilor UCB, valorile acestui indicator trebuie sa se situeze cat jos, e cunoscut faptul ca revistele romanesti nu se bucura de o mare vizibilitate pe plan international.

O alta analiza, utila managementului cercetarii dintr-o institutie este cea cu privire la domeniile unde au fost publicate articolele, Prezentam in tabelul urmator situatia domeniilor publicatiilor ISI ale UCB. Se pot identifica acele domenii unde exista o

The first indicator is the weight of articles published in Romanian magazines. In this case we count 29 articles which mean 53.7%. In order to increase the visibility of UCB ISI publications, the values of this indicator have to be as low as possible. It is well known that Romanian magazines do not enjoy great visibility at international level.

Another analysis useful for the research management in an institution is that regarding the fields where the articles have been published. We present in the following table the status of UCB ISI fields. One can identify those fields

preocupare mai intensă în instituție și anumite fonduri se pot direcționa cu prioritate către acestea.

where there is a more intense concern in the institution and certain funds can be mainly directed towards them.

Nr. Crt.	DOMENIU ISI	Nr. publicatii	Pondere
1	CHEMISTRY, MULTIDISCIPLINARY	17	31.48%
2	ENGINEERING, CHEMICAL	15	27.78%
3	ENVIRONMENTAL SCIENCES	8	14.81%
4	MATERIALS SCIENCE, MULTIDISCIPLINARY	8	14.81%
5	MATHEMATICS	7	12.96%
6	MATHEMATICS, APPLIED	7	12.96%
7	AUTOMATION & CONTROL SYSTEMS	3	5.56%
8	COMPUTER SCIENCE, INFORMATION SYSTEMS	3	5.56%
9	THERMODYNAMICS	3	5.56%
10	ENERGY & FUELS	2	3.70%
11	ENGINEERING, MECHANICAL	2	3.70%
12	MATERIALS SCIENCE, CERAMICS	2	3.70%
13	OPTICS	2	3.70%
14	PHYSICS, APPLIED	2	3.70%
15	COMPUTER SCIENCE, THEORY & METHODS	1	1.85%
16	CONSTRUCTION & BUILDING TECHNOLOGY	1	1.85%
17	ECONOMICS	1	1.85%
18	ENGINEERING, CIVIL	1	1.85%
19	MECHANICS	1	1.85%
20	METALLURGY & METALLURGICAL ENGINEERING	1	1.85%
21	STATISTICS & PROBABILITY	1	1.85%

Nr. Crt.	ISI FIELD	Nr. Publications	Weight
1	CHEMISTRY, MULTIDISCIPLINARY	17	31.48%
2	ENGINEERING, CHEMICAL	15	27.78%
3	ENVIRONMENTAL SCIENCES	8	14.81%
4	MATERIALS SCIENCE, MULTIDISCIPLINARY	8	14.81%
5	MATHEMATICS	7	12.96%
6	MATHEMATICS, APPLIED	7	12.96%
7	AUTOMATION & CONTROL SYSTEMS	3	5.56%
8	COMPUTER SCIENCE, INFORMATION SYSTEMS	3	5.56%
9	THERMODYNAMICS	3	5.56%
10	ENERGY & FUELS	2	3.70%
11	ENGINEERING, MECHANICAL	2	3.70%
12	MATERIALS SCIENCE, CERAMICS	2	3.70%

13	OPTICS	2	3.70%
14	PHYSICS, APPLIED	2	3.70%
15	COMPUTER SCIENCE, THEORY & METHODS	1	1.85%
16	CONSTRUCTION & BUILDING TECHNOLOGY	1	1.85%
17	ECONOMICS	1	1.85%
18	ENGINEERING, CIVIL	1	1.85%
19	MECHANICS	1	1.85%
20	METALLURGY & METALLURGICAL ENGINEERING	1	1.85%
21	STATISTICS & PROBABILITY	1	1.85%

De mentionat aici, un articol poate sa fie incadrat in mai multe domenii ISI dupa cum revista a solicitat aceste domenii la inscrierea in baza ISI in functie de specificul publicatiilor proprii. Astfel, un articol din “Revista de chimie” figureaza atat la CHEMISTRY, MULTIDISCIPLINARY, dar si la ENGINEERING, CHEMICAL.

We should mention that an article can be included in more ISI fields, according to the magazine’s request at the registration in the ISI database depending on the publications specificity. Therefore, an article from the “Chemistry Magazine” is included both in CHEMISTRY, MULTIDISCIPLINARY, and in ENGINEERING, CHEMICAL.

Evolutia numarului de publicatii ISI ale UCB, in timp si pe diversele tipuri de lucrari stiintifice este prezentata in tabelul urmator:

Document type\an	2005	2006	2007	2008	2009
Article	8	6	6	19	12
Proceedings paper	4	4	3	6	8
Total lucrari ISI	12	10	6	25	20

The evolution of the number of UCB ISI publications in time and on various types of scientific papers is described in the following table:

Document type\an	2005	2006	2007	2008	2009
Article	8	6	6	19	12
Proceedings paper	4	4	3	6	8
Total ISI papers	12	10	6	25	20

Concluzii

Se observa o crestere semnificativa a numarului de publicatii ISI la nivelul anului 2008, aceasta se poate pune pe seama lansarii programului PNII avand in componenta si un proiect de premiere a publicatiilor ISI (article, proceedings paper, review) din zona revistelor.

Conclusions

We notice a significant increase of the number of ISI publications in 2008, which can be explained through the launch of the PNII program which includes an awarding project for ISI publications (article, proceedings paper, review) in the magazines area.

La nivelul anului 2009 se inregistreaza o scadere cauzata de resimtirea efectelor crizei financiare mondiale si la nivelul tarii noastre, scadere care se inregistreaza si in 2010, astfel la sfarsitul lunii mai UCB este prezenta in baza ISI cu 5 lucrari stiintifice, 3 articole publicate in reviste cotate ISI si 2 lucrari in volumele unor conferinte indexate ISI.

De remarcat paleta variata a revistelor unde se regasesc publicatiile UCB, aceasta numara 26 de titluri din care 8 (31%) reprezinta reviste din Romania, dar care acopera doar 20 (41%) de lucrari stiintifice.

Din punctul de vedere al numarului de citari, din cele 76 de lucrari stiintifice ISI ale UCB, 29 (38%) dintre ele au fost citate in baza ISI. Numarul total de citari regasit a fost de 46, iar indicele HIRSCH atasat UCB are valoarea 3.

Topul celor mai citate lucrari ISI ale UCB este format din:

1. Simonescu, CM; Patron, L; Teodorescu, VS; Brezeanu, M; Capatina, C “A facile chemical route to copper sulfide CuS nanocrystallites - pH effect of the morphology and the shape of them” JOURNAL OF OPTOELECTRONICS AND ADVANCED MATERIALS, 8 (2): 597-600 APR 2006- **Proceedings Paper-4 citari** (Materials Science, Multidisciplinary; Optics; Physics, Applied)
IMPACT FACTOR 1.106
2. Covei, DP “Existence and asymptotic behavior of positive solution to a quasilinear elliptic problem in R-N” NONLINEAR ANALYSIS-THEORY METHODS & APPLICATIONS, 69 (8): 2615-2622 OCT 15 2008- **Article-3 citari** (Mathematics, Applied; Mathematics)
IMPACT FACTOR 1.295
3. Dobrota, D “Some considerations

In 2009 a decrease was recorded caused by the effects of the worldwide financial crisis, a decrease which is also recorded in 2010, therefore at the end of May, UCB is present in ISI database with 5 proceeding papers, 3 articles published in ISI quoted magazines and 2 papers in the volumes of some ISI indexed conferences.

We should notice the variety of magazines where we can find UCB publications, that is 26 titles of which 8 (31%) are magazines from Romania, but which cover only 20 (41%) of proceeding papers.

From the point of view of citations number, of the 76 UCB ISI proceedings papers, 29 (38%) of them were cited in ISI database. The total number of citations found was 46 and the HIRSCH index attached to UCB has value 3.

The top of the most cited UCB ISI papers consists of:

1. Simonescu, CM; Patron, L; Teodorescu, VS; Brezeanu, M; Capatina, C “A facile chemical route to copper sulfide CuS nanocrystallites - pH effect of the morphology and the shape of them” JOURNAL OF OPTOELECTRONICS AND ADVANCED MATERIALS, 8 (2): 597-600 APR 2006- **Proceedings Paper-4 citari** (Materials Science, Multidisciplinary; Optics; Physics, Applied)
IMPACT FACTOR 1.106
2. Covei, DP “Existence and asymptotic behaviour of positive solution to a quasilinear elliptic problem in R-N” NONLINEAR ANALYSIS-THEORY METHODS & APPLICATIONS, 69 (8): 2615-2622 OCT 15 2008- **Article-3 citari** (Mathematics, Applied; Mathematics)
IMPACT FACTOR 1.295
3. Dobrota, D “Some considerations

regarding the constitutive equations used during the study of mincing rubber waste without insertion” MATERIALE PLASTICE, 42 (4): 317-320 2005- **Article-3 citari** (Materials Science, Multidisciplinary) IMPACT FACTOR 0.412

Un alt indicator de performanta ce trebuie urmarit in publicarea stiintifica este factorul de impact al revistei. Se observa ca un factor bun de impact atrage dupa sine si cresterea celui mai important indicator scientometric, numarul de citari.

Orientarea in continuare a publicatiilor UCB catre revistele cotate ISI sau conferinte indexate ISI va ridica gradul de vizibilitate a universitatii si, implicit, ocuparea unui loc cat mai bun in clasamente tip webometrics. Intr-un astfel de clasament, UCB se situeaza pe pozitia 30 (<http://www.4icu.org/ro/>).

regarding the constitutive equations used during the study of mincing rubber waste without insertion” MATERIALE PLASTICE, 42 (4): 317-320 2005- **Article-3 citari** (Materials Science, Multidisciplinary) IMPACT FACTOR 0.412

Another indicator that should be followed in scientific publication is the magazine’s impact factor. We notice that a good impact factor draws the increase of the most important scientometric indicator, the number of citations.

UCB’s further orientation towards ISI quoted magazines or ISI indexed conferences will increase the university’s level of visibility and implicitly will result in the occupation of a good place in webometrics type tops. In such a top, UCB is the 30th (<http://www.4icu.org/ro/>).

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